arrow 40

arrow 55

Fluid Head

OPERATOR'S MANUAL

#1025 Arrow 40 Fluid Head
#1028 Arrow 55 Fluid Head

Features and Controls

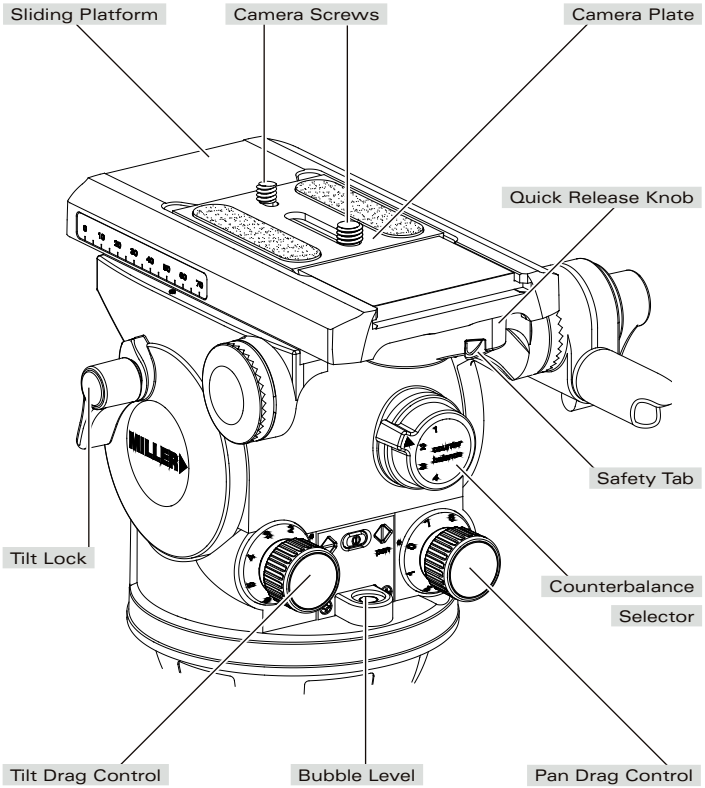

Fig. 1

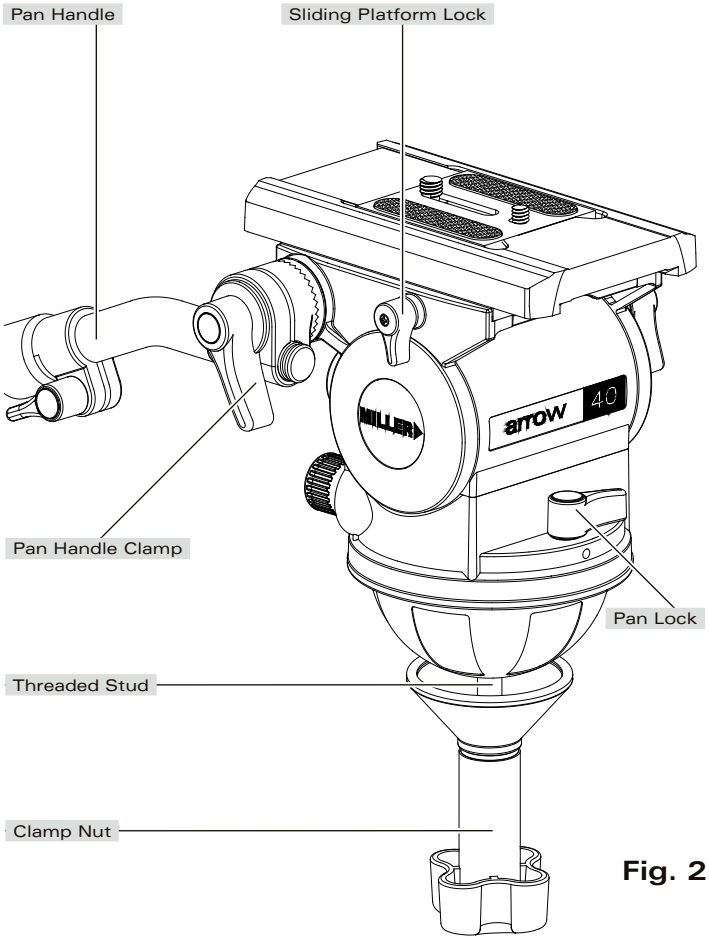

Fig. 2

Introduction

Thank you for purchasing the Arrow 40/55 Fluid Head. The Arrow 40 Fluid Head has been designed to suit payload capacities from ENG to standard configuration EFP cameras. The Arrow 55 Fluid Head has been designed to suit EFP and Studio cameras.

The robust design and construction of the Arrow 40/55 Fluid Head offers maximum stability, accuracy and durability and includes precision ball bearing mounted Fluid Drag Plate system in the Pan and Tilt assembly to deliver true fluid drag performance over the entire temperature and payload range.

The Fluid Drag and the Counterbalance system were designed to provide excellent control and repeatability and offer progressive equal increments of drag and torque.

The Arrow 40/55 Fluid Head also offers Illuminated single control location for operating Pan/Tilt, Counterbalance and viewing Bubble level.

The Arrow 40/55 Fluid Head will give best performance when used on a wide range of Miller tripods, including SOLO ENG (#1505), Sprinter II (#1589, #1580, #1576) and HD (#931) tripod. This will ensure maximum system stability to suit any professional set-up. The Arrow 40/55 Fluid Head will suit most industry standard 100 mm tripods as well, please refer to manufactures' manual for mounting details.

Safety Instructions

Attaching/removing the camera

Please use this manual to familiarise yourself with the operation of the Arrow 40/55 Fluid Head and observe these instructions to prevent any damage to your equipment. Ensure that all equipment is operating correctly and free from defects and damage, also please ensure that the tripod is steady, secure and that the bowl is approximately horizontal when attaching the camera. The operator is responsible for the safe operation of this piece of equipment.

- Do not exceed the maximum payload capacity of the Fluid Head.
- Do not leave the camera unattended on the Fluid Head.
- Do not release the SLIDING PLATFORM LOCK whilst the camera is at an angle.
- Do not adjust the tripod whilst the camera is attached to the Fluid Head.
- Ensure PAN HANDLE CLAMP and CLAMP NUT is securely tightened.
- Apply TILT LOCK when adding/removing equipment from the camera or when attaching/removing the camera from the Fluid Head.
- Hold camera securely whilst changing Counterbalance, Pan Drag or Tilt Drag settings.
- Hold the camera securely whilst releasing the QUICK RELEASE KNOB.
- Hold camera securely whilst adjusting the CLAMP NUT to level the Fluid Head.

Technical Data

	Arrow 40	Arrow 55
Weight - kg (lb)	3.2 (7.0)	3.2 (7.0)
Payload Range - kg (lb)	7.0 – 16.0 (15.4 – 35.3)	10.0 – 25.0 (22.0 – 55.1)
Max Capacity - kg (lb)	25 (55.1)	25 (55.1)
Tilt Drag	7 Selectable fluid drag positions + 0	7 Selectable fluid drag positions + 0
Tilt Range	+ 90° / -75°	+ 90° / -75°
Tilt Lock	Positive Lock calliper brake system	Positive Lock calliper brake system
Pan Drag	7 Selectable fluid drag positions + 0	7 Selectable fluid drag positions + 0
Pan Range	360°	360°
Pan Lock	Positive Lock calliper brake system	Positive Lock calliper brake system
Counterbalance System	4 Selectable positions (see Fig. 7)	4 Selectable positions (see Fig. 8)
Camera Platform Type	Quick release sliding platform with 70 mm travel.	Quick release sliding platform with 100 mm travel.
Camera Plate	1⁄4", 3/8"	1⁄4", 3/8"
Mounting Base	Ø100 mm Ball Levelling	Ø100 mm Ball Levelling
Ball Level Range	15°	15°
Handle	Telescopic black anodised pan handle with adjustable reach and angle.	Telescopic black anodised pan handle with adjustable reach and angle.
Temperature range - °C(°F)	-40° to +65° (-40° to +149°)	-40° to +65° (-40° to +149°)
Construction	Lightweight diecast Aluminium alloy, moulded reinforced plastics	Lightweight diecast Aluminium alloy, moulded reinforced plastics
Sealing	Water & Dust resistant	Water & Dust resistant
Finish	Matt black (low sheen) durable powder coated with anti-corrosive pre treatment	Matt black (low sheen) durable powder coated with anti-corrosive pre treatment
Warranty	3 Years	3 Years

Arrow 40

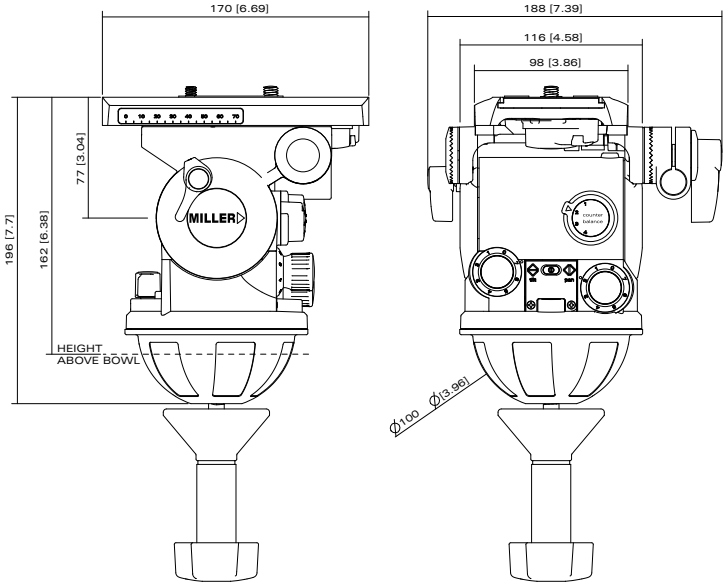

Fig. 3

Arrow 55

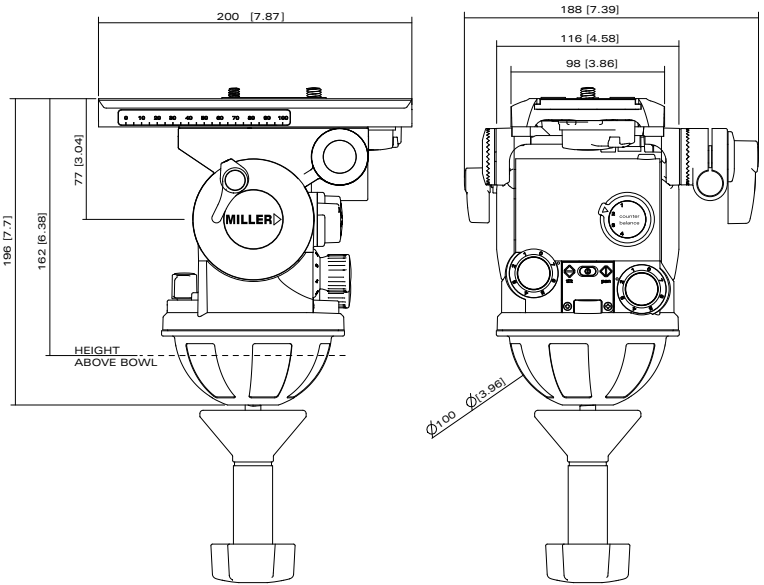

Fig. 4

Operating Instructions

The operating instructions are described in six steps. Please read and understand these instructions before using this equipment. Do not omit any steps.

1 Fluid Head Set-up

1.1 Loosen the PAN HANDLE CLAMP fully then rotate the PAN HANDLE until it is approximately perpendicular to the THREADED STUD (fig. 5) and tighten the PAN HANDLE CLAMP - avoid contact wear between the serrations on the Fluid Head and the PAN HANDLE CLAMP, if this occurs then unwind the PAN HANDLE CLAMP further.

1.2 Ensure that the TRIPOD BOWL is approximately horizontal. Place the Fluid Head into the TRIPOD BOWL, adjust the BUBBLE LEVEL (fig. 5) such that the bubble is inside the black circle and tighten the CLAMP NUT.

1.3 Set the initial control settings as follows – see Figure 1 & 2:

- Select Counterbalance to position 4 (top setting).
- Select Pan & Tilt Drag to position 0.
- Tighten the PAN LOCK, TILT LOCK and the SLIDING PLATFORM LOCK.

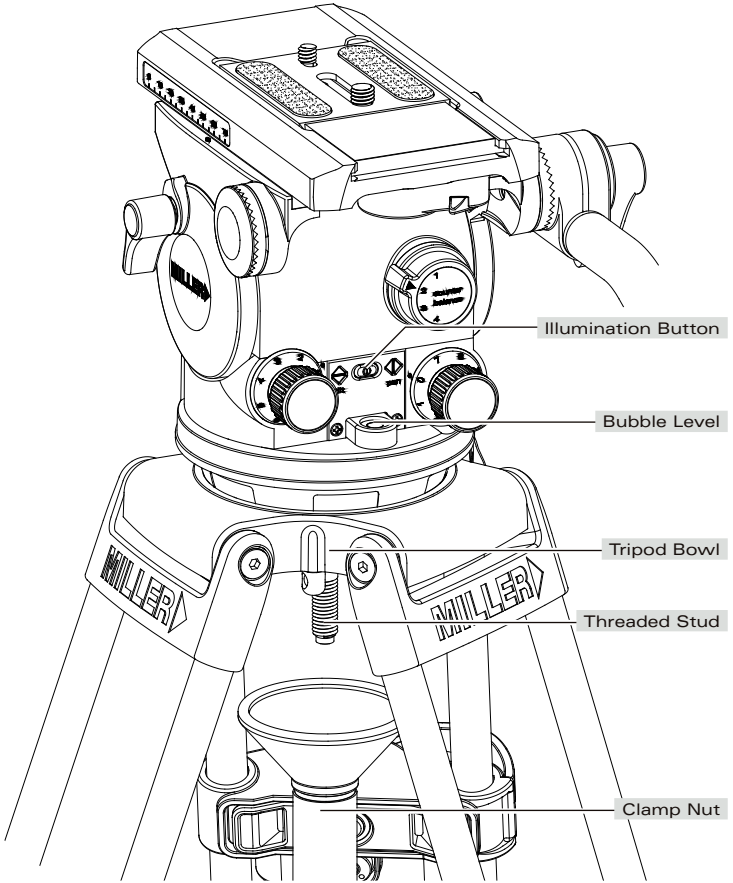

Fig. 5

2. Camera Set-up

2.1 Remove the CAMERA PLATE by pulling down the SAFETY TAB while rotating the QUICK RELEASE KNOB to the left. The CAMERA PLATE should pop out.

2.2 Refer to the Camera's owners manual for correct method of attachment to the CAMERA PLATE.

2.3 Attach camera accessories, battery and the QUICK RELEASE TRIPOD ADAPTER (if required) to the camera, it is recommended to estimate the camera's Centre of Gravity (C of G) for the purpose of correctly positioning the camera on the CAMERA PLATE. The camera's C of G can be estimated by placing the camera on to a round rod and then shifting it backwards or forwards until a balance point – C of G - is achieved. It is recommended to identify this point on the camera as it will be useful in step 2.5.

2.4 Attach the CAMERA PLATE to the QUICK RELEASE TRIPOD ADAPTOR such that the C of G mark on the camera is approximately 10 – 20 mm behind the front edge of the CAMERA PLATE then securely tighten the screws.

2.5 Align the CAMERA PLATE with the SLIDING PLATFORM (fig. 1) and slide it in until the safety mechanism is engaged.

2.6 Release the SLIDING PLATFORM LOCK and slide the SLIDING PLATFORM such that the camera's C of G is directly above the centre axis of the Fluid Head (fig. 6) and tighten the SLIDING PLATFORM LOCK (fig. 6). If this can not be achieved then reposition the CAMERA PLATE on the QUICK RELEASE TRIPOD ADAPTOR – step 2.4. This will ensure that the system has maximum stability.

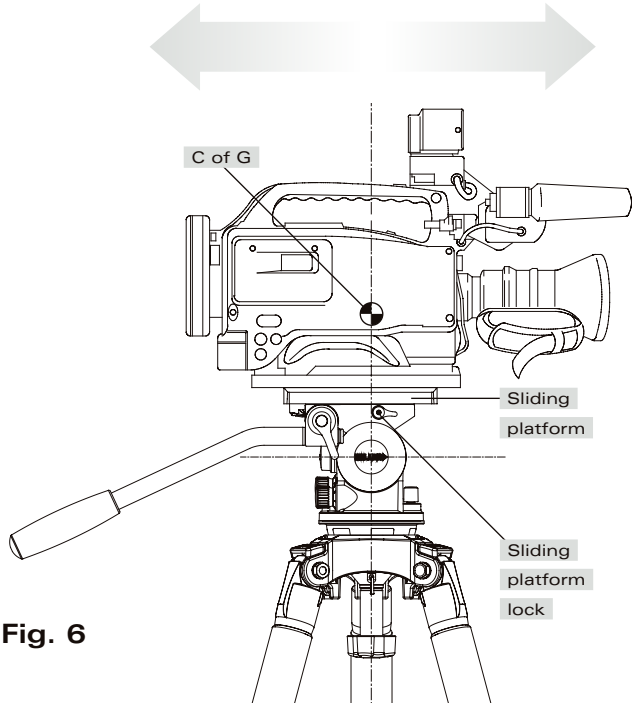

Fig. 6

3. Counterbalance Control

The counterbalance system was designed to neutralise the effect of the camera weight when it is tilted. The Arrow 40/55 Fluid Head offers a 4 position counterbalance system which can be operated via the COUNTERBALANCE SELECTOR (fig. 1). The COUNTERBALANCE SELECTOR must be operated when the SLIDING PLATFORM is in a horizontal position. After changing the Counterbalance setting it may be necessary to tilt the camera back and forth to ensure that the CB spring has engaged. The camera must be held securely while changing the Counterbalance setting.

3.1 For safety ensure that Counterbalance position 4 is selected.

3.2 Hold the camera and release the TILT LOCK, then gently tilt the camera from a horizontal position forward then backward and observe its response. If the Camera 'Springs Back' to the horizontal position then a lower Counterbalance setting is required, select Counterbalance position 3 and recheck, select lower setting again if necessary. Correct counterbalance setting has been acheived when minimum effort is required to move the camera over the entire tilt range.

TIP Fine tuning can be achieved by adjusting the SLIDING PLATFORM – see step 2.6.

Counterbalance Performance

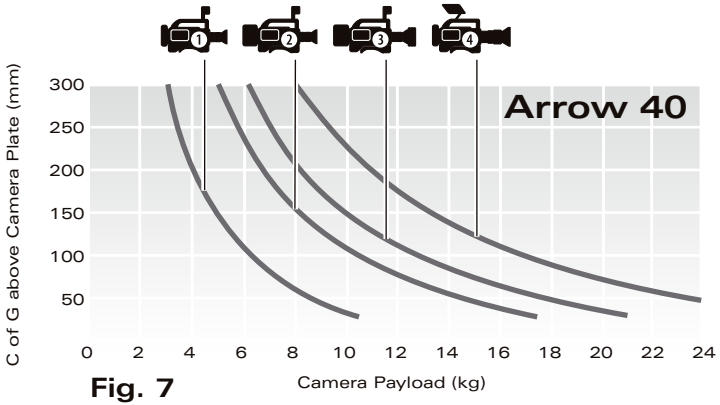

Fig. 7

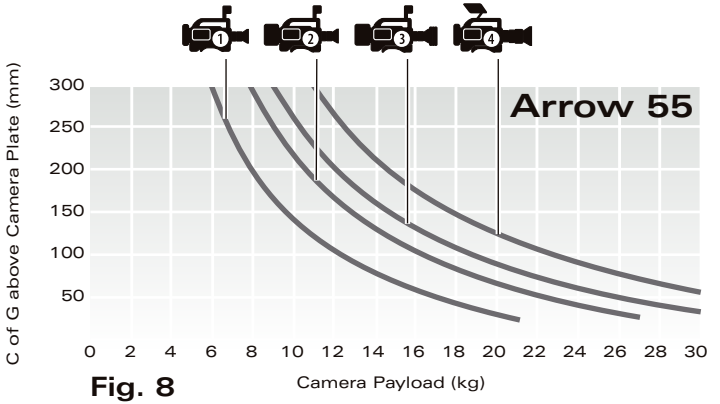

Fig. 8

4. Pan / Tilt Drag Control.

The Arrow 40/55 Fluid Head offers 7 selectable positions of fluid drag + zero setting in the Pan and Tilt. The settings are equally stepped from light drag in position 1 up to heavy drag in position 7, the drag plates are completely disengaged in position zero.

- Do not Pan or Tilt the Fluid Head whilst adjusting PAN or TILT DRAG CONTROL or whilst the PAN & TIL DRAG CONTROL is between settings.
- The drag setting can be changed at any tilt or pan angle.

5. Pan/Tilt Lock Control.

The Arrow 40/55 Fluid Head offers high capacity calliper disc brake system to hold the Fluid Head in a fixed pan and/or tilt position. Camera position will not change when applying or releasing the Pan/Tilt locks.

- Do not pan or tilt the Fluid Head whilst the PAN or the TILT LOCK is partially applied.

6. Illumination.

The Arrow 40/55 Fluid Head offers illumination of the PAN & TILT DRAG CONTROL settings, BUBBLE LEVEL and PAN & TILT INDICATOR when the low ambient light conditions exist. Illumination can be achieved by pressing the ILLUMINATION BUTTON once. The light will switch off after 10 seconds.

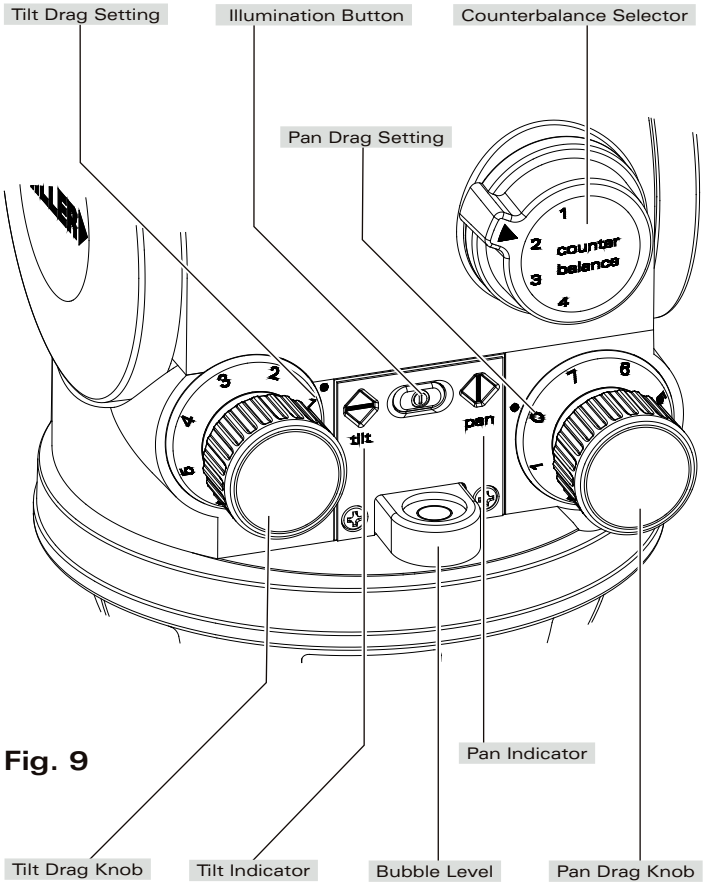

Fig. 9

Maintenance

The Arrow 40/55 Fluid Head offers high quality surface coatings, dust and moisture seals. Miller recommends keeping the Fluid Head clean at all times by using soft brushes and lint free cloth to wipe over the surfaces.

- Do not immerse the Fluid Head in any liquid.
- Do not use stiff brushes, abrasives, harsh detergents and solvents.

Battery Replacement

The Arrow 40/55 Fluid Head uses a single GP23A type - 12 Volt battery for Illumination. Miller recommends the following batteries to provide long life performance – Duracell MN21/23, Eveready A23 or Vinnic L1028.

- Using a Phillips Head #1 screw driver, remove the two RETAINING SCREWs, BATTERY DOOR and the old battery.
- Insert the new battery as shown in figure 10.
- Insert the tab on the BATTERY DOOR into the body first then align the two screw holes and tighten the screws snugly.

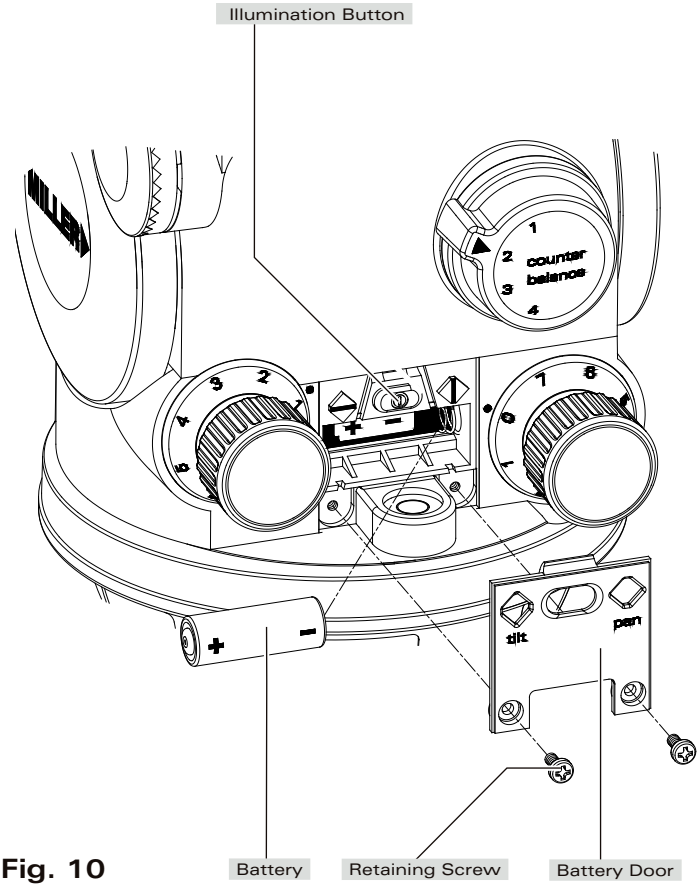

Fig. 10

Storage

The Arrow 40/55 Fluid Head can be stored for extended periods; Miller recommends storage in a Miller Soft Case and the following:

- Remove battery.
- Clean the external surfaces.
- Keep in a dry place away from direct sunlight.
- Loosen off PAN & TILT LOCK.

Spare Parts and Accessories

ITEM	ITEM NO.
Battery	P3798
Camera plate Assembly (Including 3/8" + 1/4" screws)	# 860
Camera screw 3/8"	P0037
Camera screw 1/4"	P0036
Telescopic Pan Handle assembly (incl. Handle Clamp)	# 694
Standard Pan Handle	# 692
Soft Case	# 870
Soft Case	# 872
Clamp nut	P3836

Warranty

Please refer to warranty card for complete details.

Service, Sales and Support

Miller Authorised Service Agents must carry out all service and repair work. Failure to observe this requirement may void warranty. It is advisable to notify Miller or a Miller Authorised. Service Agent if a change of performance is observed as a result of dropping or rough usage. For information regarding sales and service of Miller products or for your nearest Miller representative please contact us via our website or at the following:

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